The Socio-Cultural Dynamics of Risk Perception
Award # 0433385
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Decision Research

Overall Mission/Objective

Risks and risk management occur within a rich and complex socio-cultural context, in which groups of individuals are predisposed to select, ignore and interpret risk information in different ways. This exploratory project is part of a broad program to understand the socio-cultural dynamics of risk perception, decision-making and behavior. Specifically, this research will attempt to identify, describe and explain the existence of discrete "interpretive communities of risk:" clusters of individuals who share mutually compatible risk perceptions, connotative meanings, worldviews, and sociodemographic characteristics. Results from this study will contribute to emerging theory on the roles of affect and emotion, symbolic meaning, worldviews and socio-cultural context in risk perception and decision-making.

Early research on public risk perception found important discrepancies between expert and public risk assessments, with the public often highly concerned about some low-probability hazards (e.g., nuclear accidents), yet relatively unconcerned about other high-probability hazards (e.g., natural disasters). Subsequent research found that this discrepancy between expert and public risk priorities could not simply be blamed on public ignorance (e.g., the "information deficit model"). Numerous studies have subsequently demonstrated that knowledge about risks, while important, is not sufficient to explain risk perceptions and behavior. Further, scientists, decision makers and risk communicators are increasingly aware that providing more detailed and accurate scientific information, while important, is not sufficient to generate appropriate public concern for some risks or to allay public fears about others.

Subsequent research within the "psychometric paradigm" identified the subjective profile of various risks, finding that certain risks (e.g., nuclear accidents) scored very high on two underlying dimensions – dread risk and unknown risk – while other risks (e.g., smoking) scored very low. This research helped to explain why the general public often perceives risks like nuclear accidents as extremely serious (despite the fact that nuclear accidents are very rare and have killed relatively few), while everyday hazards like smoking are perceived as relatively low risks, despite the fact that thousands die each year from smoking-related diseases. The psychometric approach, however, did not examine or explain why some sub-groups of the public perceive particular risks as extremely serious while others do not.

Thus, we still know relatively little about how the characteristics of the risk perceivers themselves influence public risk perceptions. To address this, recent research has focused on the broader sociocultural and cultural context of risk perception, examining how sociodemographic factors like sex, race, income and education, and cultural factors like trust, social values and worldviews influence risk perception. Thus, researchers are increasingly asking not just "What does the public perceive as a risk and why?" but "Who perceives risk and why?"

This project is guided by the following research questions: Can we identify distinct interpretive communities of risk among the American public? If so, what are their distinguishing characteristics? Are these interpretive communities dynamic and in constant flux, or are they relatively stable, transcending particular risks? In other words, do interpretive communities that are substantially different in character form around different kinds of risks (e.g., health vs. security risks), or are there groups who consistently perceive and interpret a wide variety of risks in similar ways? Finally, why do some interpretive communities perceive particular hazards as extreme risks, while others perceive these same hazards as very low or non-existent risks?

Progress and (Preliminary) Outcomes

To explore these questions, we designed and implemented a nationally representative survey of the American public (n = 815) in June, 2005. This survey measured public risk perceptions regarding nuclear power, global warming, legal abortion, genetically modified food, terrorism, homosexuality, the Iraq War, gun control, marijuana, and pesticides. Respondents were asked whether they think these items are good or bad (affect), how great of a risk each is for the United States, and how much they worry about each of them. Respondents also provided the "first thought or image" that comes to mind when they think of each issue. Respondents were also asked a series of questions designed to measure value orientations toward egalitarianism, individualism, hierarchism, fatalism, and cultural relativism. Finally, respondents were asked a series of sociodemographic questions, including measures of media behavior. Analysis is currently on-going, but preliminary results indicate that distinct interpretive communities of risk can be identified, in which members share similar risk perceptions, connotative meanings, worldview and sociodemographic characteristics.

Broader Impacts

This project should demonstrate the utility of affective image analysis for the study of diverse risk perception issues. This project will also promote graduate student training in risk perception theory, survey methodology and analysis. Finally, it will also provide invaluable information on the socio-political dynamics of public risk perception for risk managers and communicators. One of the first principles of communication is to "know your audience." The communication of risk information will be greatly facilitated by a detailed understanding of what particular audiences (interpretive communities) are predisposed to believe or disbelieve, trust or distrust, support or not support. Identification of the salient connotative meanings held by the public for particular risks should be invaluable for risk communicators who wish to design and test messages intended to evoke, correct or challenge these critical elements of risk perception. This research will also explore the role of social values and political ideology in risk perception. Risk management and communication efforts that ignore these socio-cultural dynamics will often fail or generate active opposition and even hostility. This research will contribute to our understanding of these dynamics.